

## REMARKS

The Official Action dated August 22, 2002 has been carefully considered. Accordingly, the changes presented herewith, taken with the following remarks, are believed sufficient to place the present application in condition for allowance. Reconsideration is respectfully requested.

By the present Amendment, the specification is amended at page 9, lines 33 and 35, and at page 17, line 20, to correct the inadvertent omission of "aromatic-" in describing the diacyl peroxides employed in the instant invention. Claims 12-15 are added, with support being found, for example, at pages 4-6 and 8-10 of the specification. It is believed that these changes do not involve any introduction of new matter, whereby entry is believed to be in order and is respectfully requested.

Claims 1 and 4-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,338,474 to Kaiserman. Specifically, the Examiner asserts that Kaiserman teaches a bleaching system comprising a peracid bleach precursor and an lipase enzyme for hydrolyzing the peracid bleach precursor, wherein the bleach precursor may be any diacyl peroxide and that suitable diacyl peroxides include the same as those recited in the instant claims. The Examiner further asserts that Kaiserman teaches that the bleach release system may be employed or included within a variety of cleaning applications or formulations such as straight bleach products, pre-wash products, and various hard surface cleaners.

This rejection is traversed and reconsideration is respectfully requested.

More particularly, as defined by claim 1, the invention is directed to a method for removing stains from fabrics and improving fabric color safety. The method comprises contacting a soiled fabric with a bleaching composition comprising a diacyl peroxide of

specified formula in which  $R_1$  is an aliphatic group and  $R_2$  is an aromatic group. The composition has a pH of between about 2 and about 5. As set forth throughout the present specification, the aliphatic-aromatic diacyl peroxide employed in the present methods not only provides effective stain removal but preserves fabric color integrity.

Applicants' inventive method addresses the problem of the generally competing properties of effective stain removal and preservation of fabric color integrity that occur when using traditional bleaching systems comprising peroxygen bleaching agents, including diacyl peroxides such as benzoyl peroxide. Kaiserman broadly discloses systems for releasing a peracid from a peracid and bleach source such as a diacyl peroxide using a lipase enzyme as an activator. At column 2, Kaiserman broadly discloses a structural formula for diacyl peroxide. However, Applicants find no teaching or suggestion by Kaiserman that an aliphatic-aromatic diacyl peroxide provides any improvement over other types of diacyl peroxides and in fact, Kaiserman prefers benzoyl peroxide as set forth at column 3, line 67 - column 4, line 6. The exemplary embodiments of Kaiserman similarly employ benzoyl peroxides.

Specifically, Applicants find no teaching or suggestion by Kaiserman regarding the aliphatic-aromatic diacyl peroxides employed in the instant claimed methods, that would suggest to an ordinary person in the art a reasonable expectation of success with regard to stain removal together with improved color fabric safety. Applicants appreciate the Examiner's comments regarding inherency, but remind the Examiner that inherency and obviousness are distinct legal concepts. *In re Chupp*, 816 F.2d 643, 2 USPQ 2d 1437 (Fed. Cir. 1987). The Federal Circuit has repeatedly and clearly enunciated the rule that in order for an inherency to be considered as a basis for an obviousness rejection, it must be of a known property. "That which may be inherent is not necessarily known. Obviousness

cannot be predicated on what is unknown." *In re Rijckaert*, 9 F.2d 1531, 28 U.S.P.Q. 2d 1955 (Fed. Cir. 1993). Applicants find no basis for any assertion that Kaiserman discloses or suggests aromatic-aliphatic diacyl peroxides impart improved color fabric safety while preserving bleaching efficacy during washing procedures. Further, there is no reasonable likelihood of success or achievement of similar results by reliance on the Kaiserman teachings, which comprise all diacyl peroxides, the great majority of which impair fabric color safety. The view that success would have been "inherent" cannot, in this case, substitute for a showing of reasonable expectation of success; inherency and obviousness are entirely different concepts. *In re Rinehart*, 189 USPQ 143, 148 (CCPA 1976).

Kaiserman neither addresses the issue of improved color fabric safety, particularly in combination with stain removal, nor suggests the selection of particular diacyl peroxides for methods for improving color fabric safety. Applicants' invention is directed toward a method for improving color fabric safety while preserving stain removal efficacy using aromatic-aliphatic diacyl peroxides. The novelty of Applicants' invention is in the recognition and utilization of the fact that this structural subspecies of diacyl peroxides overcomes the competing effects of efficacious bleaching performance and maintenance of the color integrity of colored fabrics. Applicants discovered that the aromatic-aliphatic species has the unique property among diacyl peroxides, when used according to Applicants' inventive method, of preserving bleaching efficacy while improving fabric color safety. This structural species is not mentioned anywhere in the Kaiserman disclosure, nor included in any of the examples contained therein, with the exception of its inclusion in the broad disclosure of diacyl peroxides as bleaching agents in general. However, the broad teachings of a reference cannot preclude establishment of unobviousness for a specifically claimed invention not anticipated by the reference, *In re Orfeo*, 169 USPQ 487 (CCPA 1971). *In re Waymouth*, 182 USPQ 290 (CCPA 1974); *In re Meyer*, 202 USPQ 175 (CCPA 1979). Hence, it would not

have been obvious to one of ordinary skill in the art, seeking to develop a method for stain removal while improving color fabric safety to employ aromatic-aliphatic diacyl peroxide as the bleaching component, as in the present methods.

It is therefore submitted that the methods defined by claims 1 and 4-11 are nonobvious over and patentably distinguishable from Kaiserman, whereby the rejection under 35 U.S.C. §103 has been overcome. Reconsideration is respectfully requested.

Claims 1 and 4-11 were rejected under 35 U.S.C. 103(a) as being unpatentable over WO No. 98/03621 to Ofosu. Specifically, the Examiner asserts that Ofosu teaches a method for treating fabrics comprising the steps of contacting, in the presence of water or a solvent which generates heat under microwave radiation, a fabric with a treating composition comprising an effective bleaching agent and subjecting the fabric to microwaves for a sufficient period to effectively treat the fabric, wherein suitable treating compositions contain from about 0.1% to about 60% of a bleaching agent which may be diacyl peroxide having the same general formula as recited by the instant claims.

This rejection is traversed and reconsideration is respectfully requested. The methods of claim 1 are discussed above, as are the improvements in stain removal and fabric color safety improvement provided thereby. In contrast, Applicants find no teaching or suggestion by Ofosu for a method providing the combination of stain removal and improved color fabric safety.

Ofosu specifically discloses employment of his inventive method for stain removal, stain reducing, deodorizing, or disinfecting. Additionally, Ofosu specifically discloses and states a preference that at least one of the R groups comprise an aromatic nucleus. However, Ofosu's preferred and most preferred embodiments comprise diaromatic peroxides exclusively (see page 7, paragraph 1) and Applicants find no specific teaching by Ofosu as to

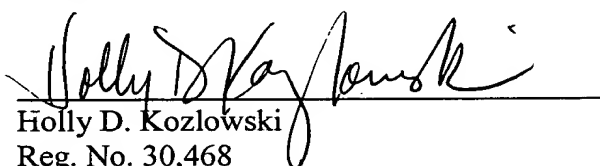
a method employing aliphatic aromatic diacyl peroxide or any improvement provided thereby. On the other hand, the methods of the present invention seek specifically to counter the diminished color intensity impact suffered in methods employing peroxygen bleaching agents, and the diaromatic diacyl peroxides *in particular* (see page 7, lines 2-3 and 28-29). Accordingly, the instant inventive method seeks to solve the problem of bleaching systems which insult fabric color integrity, a problem present in the specific compositions and methods exemplified by Ofosu. It is a nonsequitur to suppose that a person of ordinary skill in the art would have "a reasonable expectation of success and similar results" in formulating a bleaching composition that improves color safety while preserving bleaching efficacy, by relying on Ofosu, which teaches preferred embodiments that maximize both bleaching efficacy and propensity to degrade fabric color integrity. It is error to find obviousness where references diverge from and teach away from the invention at hand. *In re Fine*, 5 U.S.P.Q.2d 1596, 1599 (Fed. Cir. 1988).

Furthermore, Applicants find no consideration in Ofosu of fabric color safety and submit that there can be no suggestion of a solution when there is no discussion of the problem. Obviousness must be construed in light of the problem facing the inventor. *Northern Telecom, Inc. v. Datapoint Corp.*, 908 F.2d 931, 15 USPQ 2d 1321 (Fed.Cir. 1990). Hence, Applicant's novel discovery that aromatic-aliphatic diacyl peroxides uniquely confer improved fabric color safety while maintaining stain removal efficacy in comparison to the broad class of diacyl peroxides, and Applicant's utilization of this discovery in selecting these diacyl peroxides for a method of stain removal and improved fabric color safety is nonobvious in light of Ofosu.

It is therefore submitted that the methods defined by claims 1 and 4-11 are nonobvious over and patentably distinguishable from Ofosu, whereby the rejection under 35 U.S.C. §103 has been overcome. Reconsideration is respectfully requested.

It is believed that the above represents a complete response to the Examiner's rejections under 35 U.S.C. §103(a), and places the present application in condition for allowance. Reconsideration and an early allowance are requested.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Holly D. Kozlowski", is written over a horizontal line.

Holly D. Kozlowski  
Reg. No. 30,468  
Attorney for Applicants  
Dinsmore & Shohl LLP  
1900 Chemed Center  
255 East Fifth Street  
Cincinnati, Ohio 45202  
(513) 977-8568

**VERSION WITH MARKINGS TO SHOW CHANGES MADE**

**In the specification:**

The specification is amended as follows:

The paragraph at page 9, lines 30-36 is amended as follows:

--For stability reasons, the compositions according to the present invention that may typically comprise a bleach activator, as described hereinbefore, are preferably formulated either as aqueous emulsions of said bleach activator in a matrix comprising water, the aromatic-aliphatic diacyl peroxide, the second peroxygen bleach and an emulsifying surfactant system, or as microemulsions of said bleach activator in a matrix comprising water, the aromatic-aliphatic diacyl peroxide, the second peroxygen bleach and a hydrophilic surfactant system.--

The paragraph at page 17, lines 18-25 is amended as follows:

--The preferred making of the microemulsions of the present invention includes premixing the surfactants with water and subsequently adding the other ingredients including the aromatic-aliphatic diacyl peroxide, the second peroxygen bleach, e.g., hydrogen peroxide, and other ingredients like a bleach activator if present. Irrespective of this preferred order of addition, it is important that during the mixing of the ingredients, the microemulsions be constantly kept under stirring under relatively high stirring energies, preferably 30 minutes at 750 rpm, most preferably 30 minutes at 1000 rpm.--